L0430200004 – Du Page
Pierce & Stevens Chemical
ILD 055434443
SF/HRS

Site Reassessment

RESOURCE CONSERVATION AND RECOVERY ACT HANDLERS ASSESSMENT

For:

PIERCE & STEVENS CHEMICAL

ILD055434443

Carol Stream, Illinois

PREPARED BY:
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
BUREAU OF LAND
FEDERAL SITES REMEDIATION SECTION
SITE ASSESSMENT UNIT

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SITE BACKGROUND

Introduction

On September 26, 2000 the Illinois Environmental Protection Agency's (Illinois EPA) Site Assessment Program was tasked by the Region 5 offices of the United States Environmental Protection Agency (U.S. EPA) to undertake an initial assessment of a number of Resource Conservation and Recovery Act (RCRA) facilities within the state. These facilities are presently contained within the RCRA database but are not subject to RCRA's corrective action authorities and are currently referred to as RCRA "Handlers". This RCRA Handlers Assessment Report is designed to identify facilities that may pose a threat to human health or the environment, and to determine if placement of these facilities onto the Comprehensive Environmental Response, Compensation, and Liability Inventory System (CERCLIS) is warranted.

Site Description and History

During the initial phase of this handlers report the author conducted a review of Illinois EPA files. The Pierce & Stevens Chemical site is located at 245 E. Kehoe Boulevard in Carol Stream, Du Page County, Illinois. The company is located in an industrial park and consists of approximately eleven acres. The nearest residential area is located approximately one-quarter of a mile east of the site.

The Pierce & Stevens Chemical site is involved in the manufacture of adhesives, coatings and fillers. The adhesives and fillers are solvent-based, water-based dispersions and hot melt formulations. The fillers are a proprietary thermoplastic microsphere

technology. Operations conducted at the facility include mixing and heating raw materials, filtering coatings, and forming adhesive pellets and microspheres. The facility has a 80,000 square foot building in which operations take place. Raw materials used include solvents, nitrocellulose, acids and caustics, resins, polymers, waxes, oils, plasticizers and soaps.

The facility has sixteen mixers used to produce solvent-based adhesives and coatings by mixing solvents and other ingredients and then filtering the product as it is drained into drums for storage prior to sale. Each mixer has a capacity of 2,000 gallons. Water-based dispersion adhesives and coatings are produced from solvent-based mixtures, and the solvents are then removed as the water and a coagulant is added, leaving a dispersion of resins in water. Hot melt adhesives are mixed in heated 2,000-gallon kettles and extruded in continuous strands into a water bath which cools and hardens the material. The strands are sliced into pellets which are packaged for sale. Microspheres are produced from a solvent-based mixture, which are formed into tiny hollow spheres and coated with calcium carbonate. The facility uses a total of approximately 18 mixers and kettles. The company reuses clean-up solvents, solvents removed from water-based dispersions, and products returned by customers as start-up material for new batches whenever possible.

The facility stores solvents in the raw material warehouse in drums and in eight 10,000 gallon underground storage tanks in the north pad area. Until 1991 twelve 5,000 gallon and two 10,000 gallon underground storage located under the west dock were also used for bulk solvent storage. Waxes are stored in molten bulk in three 7,500 gallon tanks under the east dock. All other raw materials are stored in drums in the raw material

warehouse and the raw material shed north of the plant.

The Pierce & Stevens Chemical facility is a wholly owned subsidiary of Pratt and Lambert, Inc. and has operated the facility since the facility was constructed in 1972. The land use prior to 1972 was agricultural. The processes used at the facility has remained the same through the years except for the addition of the microsphere process in 1990.

The site Assessment Unit of the IEPA inspected the property on August 9, 2001. The author met with representatives of the company who conducted a visual tour of the facility. The plant is classified as a Large Quantity Generator under RCRA. The company currently employees twenty-five people who work on two shifts, five days a week. The plant has approximately 80,000 square feet under roof and drums and materials are stored inside out of the weather. During the inspection drums and materials were stored in neat order and no damaged or leaking drums or tanks were noted. The buildings are surrounded by a high chain link fence and access is through a gate that is locked when the plant is closed. Windows and doors are further protected by an alarm system. The property has a vacant field to the north and east and is located in an industrial area and is isolated from residences. Drainage from the property flows south in an unnamed ditch along the eastern side of the property that eventually could end up in the West Branch of the Du Page river.

Pathway Analysis

The city of Carol Stream, Illinois obtains its drinking water from from Lake Michigan. The city previously obtained its drinking water from municipal wells and they are currently maintained for standby use. The nearest public well is located approximately one-half mile southwest of the Pierce and Stevens facility and is finished

in the bedrock aquifer. The shallow geology of the area consists of occasional sand and gravel lenses which extend to 100 feet in depth to Silurian-age Dolomite bedrock. The dolomite aquifer is approximately 100 feet thick and overlies the Maquoketa Shale. The shallow groundwater flow near the facility is unknown but regionally the deep bedrock aquifer flows to the east.

Surface water from the facility enters drainage ditches along the property and flow southwest approximately three miles and enter the West Branch of the Du Page River. The property is located in an area of minimal flooding.

Conclusions and Recommendations

Given the limited potential of contaminants from present and former activities at this site impacting either human health or the environment, it is recommended that the Pierce & Stevens Chemical facility be archived from the Comprehensive Environmental Response and Liability Act's information system database and not be the subject of additional CERCLA investigative activities. This assessment has determined that any environmental concerns at this facility are not of a magnitude that would warrant CERCLA Removal or Remedial attention at this time.